

Claims

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1.-7. (canceled)

8. (new) A method for maintaining a sequence of packets in a connectionless packet switching network including an alternative routing in the network, comprising:

- providing a packet flow having at least a first packet and a second packet;
- receiving the first packet by a router and selecting a route for the first packet;
- storing the selected route in the router;
- forwarding the first packet along the selected route;
- receiving the second packet by a router and forwarding the second packet along the stored route;
- determining a remaining number of packets belonging to the packet flow; and
- deleting the selected route if the remaining number of packets is zero.

9. (new) The method according to claim 8, wherein the remaining number of packets is based on the packets belonging to the packet flow that are remaining in the router.

10. (new) The method according to claim 8, wherein the remaining number of packets is based on the packets belonging to the packet flow that are remaining in a queue within the router.

11. (new) The method according to claim 8, wherein the remaining number of packets is based on the packets belonging to the packet flow that are remaining in a plurality of queues within the router.

12. (new) A method for maintaining a sequence of packets in a connectionless packet switching network including an alternative routing in the network, comprising:

- storing a receive time of a first packet received by a router as a packet flow time;
- selecting a route for the first packet;

storing the selected route based on a packet flow of the first packet;
forwarding the first packet to the selected route;
receiving a second packet belonging to the packet flow by the router;
updating the packet flow time with a receive time of the second packet;
forwarding the second packet to the stored route; and
deleting the stored route and the stored packet flow time after a time from
receiving a last packet in the packet flow.

13. (new) The method according to claim 12, wherein the stored route and
stored packet flow time are deleted.

14. (new) The method according to claim 12, wherein the time is based on a
distribution of a traffic.

15. (new) A router for maintaining a sequence of packets in a
connectionless packet switching network including an alternative routing, comprising:
a flow table for storing and retrieving a route for a packet in a packet flow;
a first element for determining if the route is stored in the flow table for the
packet, if the route is not stored a second element selects a packet flow route for the
packet and subsequently stores the packet flow route in the flow table; and
a sender for sending packets along the stored route.

16. (new) The router according to claim 15, wherein the stored route in the
flow table is deleted when the packet does not exist in the router.

17. (new) The router according to claim 15, wherein the router comprises a
plurality of flow tables wherein each flow table relates to a queue in the router.

18. (new) The router according to claim 17, wherein the stored route in the
flow table is deleted when the packet does not exist in the queue related to the table.

19. (new) The router according to claim 15, further comprising a storage
unit for storing and retrieving the arrival time of the last packet in the packet flow, the
arrival time for aging the stored route.

20. (new) The router according to claim 19, wherein the aging is based on a time limit after the arrival of the last packet in the flow.